

# **Observation Well**

**Drilling Procedures** 

#### Step 1

Drive a 20-inch diameter metal casing from the surface to a depth of approximately 250 ft. near the top of the caprock.

### Step 2

Drill out the dirt from the inside of the 20-inch casing to clear a path for drilling into the caprock.

### Step 3

Drill into the caprock to a total depth from the surface of approximately 600 ft.

### Step 4

Install a 16-inch diameter casing inside of the 20-inch casing (See Step 1) to the bottom of the hole and cement the casing to the surface.

#### Step 5

Continue drilling through the caprock and another 300 ft. into the salt or to a total depth from the surface of approximately 1,000 ft.

## Step 6

Install a 10 ¾-inch diameter casing through the 16-inch casing (See Step 4) and cement it to the surface.

## Step 7

Begin directionally drilling on a diagonal path toward Cavern #3 to a total depth of approximately 3,000 ft. (about 400 ft. above Cavern #3 roof) where the bore hole will be turned to a vertical direction.

# Step 8

Install 7-inch casing through 10 ¾-inch casing (See Step 6) and cement it to the surface.

# Step 9

Complete drilling into Cavern #3 roof through 7-inch casing at a total depth from the surface of 3,400 ft.